

In the Claims:

Cancel claims 8-10 without prejudice or disclaiming the subject matter thereof;

Amend claims 1, 6, 7 and 11, as follows:

1. (Currently Amended) An antenna structure adapted to be used in an ablation device, comprising a monopole antenna including a substantially hemispherical distal tip operably disposed at a distal end of the ablation device and having a substantially conical predetermined shape defining converging proximally from the distal tip for forming an outer emission surface from which electromagnetic energy is emitted, ~~the predetermined shape having at least one tapered portion, the monopole antenna forming the distal tip of the ablation device,~~ ~~wherein the predetermined shape of the monopole antenna results in the creation of a relatively in a uniform electromagnetic field pattern about the monopole antenna in response to electromagnetic energy applied thereto.~~

2. (Original) The antenna structure of claim 1, wherein the electromagnetic energy emitted is sufficient to ablate biological tissue.

3. (Original) The antenna structure of claim 1, wherein the antenna is encased in a biocompatible material defining an outer surface.

4. (Previously Amended) The antenna structure of claim 3, wherein the biocompatible material is selected from the group consisting of polytetrafluoroethylene and polyethylene.

5. (Original) The antenna structure of claim 1, wherein the antenna is formed from stainless steel.

6. (Currently Amended) An ablation device for ablating biological tissue; comprising:

an elongated flexible tubular member adapted to be inserted into a patient's body and having a distal end;

~~a transmitting means operably attached to an electromagnetic energy conductor disposed within~~ the tubular member for transmitting ablation energy therethrough;

~~a monopole antenna attached to the conductor and including a substantially hemispherical distal tip disposed at~~ the distal end of the tubular member, ~~the monopole antenna having a conical shape converging proximally from the distal tip to form and having a predetermined shape defining~~ an outer emission surface from which electromagnetic energy is emitted, ~~the monopole antenna forming the distal tip of the ablation device and operably attached to the transmitting means,~~

~~wherein the predetermined shape of the monopole antenna results in the creation of a~~ in a substantially uniform electromagnetic field pattern about the monopole antenna in response to electromagnetic energy supplied to the conductor.

7. (Currently Amended) The ablation device of claim 6 further comprising at least one electrode ~~a sensing means~~ disposed ~~on~~ near the distal end of the tubular member proximal to the antenna for sensing electro-physiological signals.

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Currently Amended) The ablation device of claim 10, wherein the ~~a first of the~~ at least one electrode is a ring electrode.